

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A device for Multimedia authentication of a user equipment (UE) accessing a Multimedia domain (IMS) through an access network, the device ~~for use in, or in co-operation with,~~ associated with a subscriber server of the access network holding authentication data for the user equipment and accessible to the Multimedia domain (IMS), the device comprising:

means for authentication said user equipment by the subscriber server within said access network;

means for deciding that an implicit authentication between the user equipment (UE) and the Multimedia domain (IMS) can take place based on a said previous authentication of the user equipment by the access network thus skipping the needs for an explicit authentication with the Multimedia domain; and

means for instructing a serving entity (S-CSCF) in charge of authenticating the user equipment (UE) in the Multimedia domain (IMS) that implicit authentication can take place.

2. (Original) The device of claim 1, wherein the means for deciding that an implicit authentication can take place includes

means for determining the potential security of the signalling path to access the Multimedia domain through said access network.

3. (Currently Amended) The device of claim 1, wherein the means for instructing the serving entity that ~~an~~ the implicit authentication can take place includes means for indicating (~~Implicit Authentication~~) that the final decision is on the user equipment side (UE) which can force an explicit authentication.

4. (Currently Amended) The device of claim 1, wherein the means for instructing the serving entity that ~~an~~ the implicit authentication can take place includes means for indicating that this is a final decision taken by the network and no explicit authentication can be carried out.

5. (Currently Amended) The device of claim 1, further including means for notifying the user equipment that ~~an~~ the implicit authentication of the user equipment for accessing the Multimedia domain can ~~by~~ be carried out by the network.

6. (Currently Amended) The device of claim 1, wherein the means for deciding that ~~an~~ the implicit authentication between the user equipment (UE) and the Multimedia domain (IMS) can take place includes means for receiving a proposal of implicit authentication originated from the user equipment (UE).

7. (Currently Amended) The device of claim 3, further comprising means for receiving an indication originating from the user equipment (UE) to confirm the acceptance of the implicit authentication proposed by the network.

8. (Currently Amended) The device of claim 7, further comprising means for indicating to the serving entity in charge of authenticating the user in the Multimedia domain (IMS) that the user has confirmed the implicit authentication.

9. (Currently Amended) The device of claim 8, further comprising means for providing additional authentication data to said serving entity, said additional authentication data including at least one of ~~element selected from a group of elements comprising:~~

- authentication type;
- access information; and
- authentication timestamp.

10. (Currently Amended) A user equipment (UE) enabled to obtain access to a Multimedia domain (IMS) through an access network, and arranged to carry out a first explicit ~~Authentication~~ authentication procedure with the access network and a second explicit authentication procedure with the Multimedia domain (IMS), the user equipment (UE) comprising means for processing ~~at least one notification selected from a group of notifications including:~~

A a first notification received from the Multimedia domain (IMS) indicating that an implicit authentication for the user equipment can be carried out by the network based on the first explicit authentication procedure with the access network and notifying the user equipment not to perform the second explicit authentication procedure with the multimedia domain; and

~~— A second notification proposed from the user equipment (UE) towards the Multimedia domain (IMS) to carry out an implicit authentication between said user equipment and Multimedia domain.~~

11. (Currently Amended) The user equipment (UE) of claim 10, wherein the means for processing ~~a~~ the notification received from the Multimedia domain (IMS) includes means for receiving and processing an Implicit Authentication indication that the final decision is on the user equipment (UE) which can force an explicit authentication.

12. (Currently Amended) The user equipment (UE) of claim 11, further comprising means for sending towards the Multimedia domain (IMS) an Single Sign On (SSO) ~~SSO~~ enabled indication to confirm the acceptance of the implicit authentication proposed by the network.

13. (Currently Amended) The user equipment (UE) of claim 12, further comprising means for providing additional authentication data towards the Multimedia domain (IMS), said additional authentication data including at least one of element

~~selected from a group of elements comprising:~~ authentication type; access information; and authentication timestamp.

14. (Currently Amended) The user equipment (UE) of claim 10, wherein the means for processing a the notification received from the Multimedia domain (IMS) includes means for receiving and processing an the indication of Implicit Authentication by the network that the implicit authentication is a final decision taken by the network and no explicit authentication can be carried out.

15. (Currently Amended) A method for authenticating a user equipment (UE) accessing a Multimedia domain (IMS) through an access network, the method comprising the steps of:

authenticating the user equipment in the access network where the user equipment accesses through the access network having a subscriber server with authentication data for the user equipment and accessible to the Multimedia domain (IMS);

registering the user equipment (UE) into the Multimedia domain (IMS);

deciding that an implicit authentication between the user (UE) and the Multimedia domain (IMS) can take place based on the previous authentication of the user equipment (UE) in the access network, thus skipping the needs for an explicit authentication with the Multimedia domain; and

instructing a serving entity in charge of authenticating the user (UE) in the Multimedia domain (IMS) that implicit authentication can take place.

16. (Currently Amended) The method of claim 15, further comprising a step of notifying from the Multimedia domain (IMS) to the user equipment (UE) that implicit authentication of the user equipment for accessing the Multimedia domain can by be carried out.

17. (Currently Amended) The method of claim 15, wherein the step of deciding

that ~~an~~ the implicit authentication can take place includes a step of determining the potential security of the signalling path to access the Multimedia domain through said access network.

18. (Currently Amended) The method of claim 15, wherein the step of deciding that ~~an~~ the implicit authentication can take place includes a step of proposing from the user equipment (~~UE~~) towards the Multimedia domain (~~IMS~~) an implicit authentication to be carried out between said user equipment and Multimedia domain.

19. (Currently Amended) The method of claim 15, wherein the step of instructing the serving entity that ~~an~~ the implicit authentication can take place includes a step of indicating that the Implicit Authentication is a final decision taken by the network and no explicit authentication can be carried out.

20. (Currently Amended) The method of claim 15, wherein the step of instructing the serving entity that ~~an~~ the implicit authentication can take place includes a step of indicating (that the final decision is on the user equipment which can force an explicit authentication.

21. (Currently Amended) The method of claim 20, further comprising a step of confirming from the user equipment (~~UE~~) acceptance of ~~an~~ the implicit authentication proposed by the network.

22. (Currently Amended) The method of claim 21, further comprising a step of indicating to the serving entity in charge of authenticating the user equipment (~~UE~~) in the Multimedia domain (~~IMS~~) that the user equipment has confirmed the implicit authentication.

23. (Currently Amended) A serving entity in charge of authenticating a user equipment (~~UE~~) in the Multimedia domain (~~IMS~~) when the user equipment accesses

thereto through an access network where said user equipment had been previously authenticated within the access network, the serving entity comprising:

means for receiving and processing instructions originating from a device for Multimedia authentication of a user equipment (UE) indicating that an implicit authentication can take place based on the previous authentication of the user equipment (UE) by the access network; and

means for notifying the user equipment (UE) that an implicit authentication of the user equipment for accessing the Multimedia domain (IMS) can be carried out by the network.

24. (Currently Amended) The serving entity (~~S-CSCF~~) of claim 23, also comprising means for receiving an indication (~~SSO-enabled~~) originated from the user equipment (UE) to confirm acceptance of an the implicit authentication proposed by the network.

25. (Currently Amended) The serving entity (~~S-CSCF~~) of claim 23, further comprising means for receiving an indication originating from a the device for Multimedia authentication of a the user equipment (UE) indicating that the user equipment has confirmed the implicit authentication.

26. (Currently Amended) The serving entity (~~S-CSCF~~) of claim 25, further comprising means for checking the matching of additional authentication data respectively received from the device for Multimedia authentication of a the user equipment (UE) and from the user equipment for providing an extra security support.

27. (Currently Amended) The serving entity of claim 26, wherein said additional authentication data include at least one ~~of element selected from a group of elements comprising~~: authentication type; access information; and authentication timestamp.

28. (Currently Amended) The serving entity of claim 23, wherein the means for notifying the user equipment (UE) that ~~an~~ the implicit authentication can be carried out by the network includes means for indicating to the user equipment (UE) that the implicit authentication is a final decision taken by the network and no explicit authentication can be carried out.

29. (Currently Amended) A Proxy entity intended to act as an entry point into the Multimedia domain (IMS) for a user equipment (UE) accessing thereto through an access network where the user equipment had been previously authenticated with the access network, having means for processing ~~at least one notification selected from a group of notifications including:~~

~~—— a notification sent towards the user equipment (UE) to indicate that an implicit authentication of the user equipment for accessing the Multimedia domain (IMS) can be carried out by the network; and~~

a notification received from the user equipment (UE) to propose an implicit authentication towards the Multimedia domain (IMS) between said user equipment and Multimedia domain based on the previous authentication with the access network and notifying the user equipment not to perform another explicit authentication procedure with the multimedia domain.

30-31. (Cancelled)

32. (Currently Amended) An interrogating entity querying a subscriber server in the Multimedia domain (IMS) about a user equipment (UE) having accessed said Multimedia domain through an access network, the interrogating entity having means for receiving a registration request from the user, and means for acknowledging such registration towards the user equipment, and the interrogating entity comprising means for transmitting an indication towards the user equipment (UE) that an implicit authentication of the user for accessing the Multimedia domain (IMS) can be carried out based on a previous explicit authentication with the access network and notifying the

user equipment not to perform another explicit authentication with the multimedia domain.

33. (Currently Amended) The interrogating entity of claim 32 further comprising:

means for receiving an indication originating from the user equipment (UE) to enable an implicit authentication; and

means for transmitting such indication from the user equipment towards at least ~~one entity selected from a group of entities that comprise:~~

a device for Multimedia authentication of a user equipment and a serving entity in charge of authenticating a user equipment.

34. (Currently Amended) The interrogating entity of claim 32 further comprising means for transmitting towards the user equipment (UE) ~~an~~ the indication ~~(that the implicit authentication is a final decision taken by the network and no explicit authentication can be carried out.~~

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